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ABSTRACT

Studies by the Exemplary Center for Reading Instruction and others reveal that teacher characteristics account for beginning readers' performance more than do program characteristics. To be most successful in acquiring reading skills, pupils need teachers who provide enough time for practice in skills, who can prompt (model, demonstrate) the correct response but gradually phase out prompting, who can elicit responses from pupils, who can diagnose and prescribe instantly when incorrect responses occur, who believe in the students' ability to learn, and who employ consistent behavior-management techniques. In order to achieve excellence, teachers should be aware of these characteristics and be able to apply them. In addition, the identification of reading and language arts skills, the utilization of inservice education, and the development of positive esteem for the teacher role are essential.

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SCHOOL READING PROGRAMS: CRITERIA FOR EXCELLENCE
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at the University of Pittsburgh)

I was asked to direct my remarks to resources and personnel in reading programs. Since one of the conclusions of the national First Grade Studies, 1967, was that teacher behavior is of greater significance than materials in affecting gains in reading achievement, most of my time will be directed toward personnel.

The First Grade Studies found greater variation among the classes within any method than between the methods. This was true even when the effects of difference in children within the classes and between methods are controlled by covariance. The fact that differences in achievement among the classes still persisted even after the pupil variations were held constant by statistical means, indicates that the variation found between classes is due to differences in teachers.

In 1966-67 the Exemplary Center for Reading Instruction conducted a study to evaluate the effectiveness of the beginning reading programs then currently in use in Granite School District, Salt Lake City, Utah.

The testing program for that year involved pre-tests of the Murphy-Durrell Reading Readiness Analysis and the Lorge Thorndike I. Q. Test. February and May testing included the Gates-MacGinitie silent reading vocabulary and comprehension tests, the Gilmore Oral reading rate, accuracy, and comprehension tests, Attitude Toward Reading test, Motivation to Read test, creative writing sample to measure number of words, clause index, and T-unit length, and a Linguistic Reading Test. 1,295 first grade pupils were involved in the study.

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The results of this evaluation identified those programs which were yielding the greatest end-of-year achievement for three different beginning-of-year readiness levels. No single reading program was found to be either significantly better than all others on all variables or to be uniquely effective for pupils of any given level of pre-instructional readiness.

In addition to the comparative study of beginning reading programs, pupils in a variety of reading programs for several years were evaluated. Gains made over a five-year period of all pupils who had been taught reading in one of seven basal reading programs were compared. Pupils in the study had been in the same basal reader for the first five years of their schooling. I.Q. scores were used to group them in high, middle, and low ability groups. This comparison of gains indicated that no single basal reading program was outstanding for high, middle, or low ability pupils and that the I.Q. level of the pupil affected the gain score. The pupil with a high I.Q. attained greater gains in reading achievement than the pupil with a low I.Q., regardless of the basal reading program.

A comparison of the effect of different materials upon pupil gains in reading is insignificant in comparison to the effect of teacher behavior on pupil gains. Because of this, I would like to focus my attention on the teacher.

Research and practice have isolated teacher behaviors important for reading success. To be most successful in learning reading skills, pupils need teachers who:

1. Provide time for the number of practices needed and additional skills

activities for those who need them.

2. Prompt (model, demonstrate) so pupils respond correctly (and are able to make finer discriminations) and gradually fade prompts until they respond correctly independently of the teacher.
3. Elicit responses from pupils. Allow them to do and say.
4. Diagnose and prescribe instantly when incorrect or no responses occur.
5. Believe they can learn. Expect high mastery (95 - 100%) levels with rate as a criterion. Allow them to move on in skills sequences as rapidly as they achieve mastery.
6. Employ consistently behavior management techniques which most effectively extinguish incorrect responses, reinforce correct responses and maintain them at the rate and accuracy levels established.

PROVIDES TIME

An analysis of teacher differences was made possible at ECRI with a regression equation used to determine residual gain scores for each pupil. Those teachers with a greater percentage of their low, middle, or high ability pupils above the regression line (perform better than predicted) were the ones who were getting greatest gains for that ability group. These teachers were then observed to determine what characteristics of teacher behavior are associated with these differences in effectiveness. It was found that those teachers who were getting greatest gains above prediction were spending more time per day in direct reading instruction. Time spent daily in direct reading instruction was related to the achievement gain of pupils.

PROMPTS

In a study of the effects of errors in discrimination learning with children, ECRI found that pupils who make fewer errors as they learn are more accurate in the fine discriminations necessary in learning complex relationships.

Leif Fearn in The Quest for Competency in Teaching Reading (IRA) writes, "Pupils tending toward the lower end of a rank order of achievement test scores can benefit greatly from being provided an accurate oral model of the material which they are reading."

G.A. Kimble and J.J. Wulff looked at the value of guiding pupils' responses. Two kinds of participation procedures were used in their study. In one of the trainee's participations, responses were guided and were restricted to the right ones or nearly the right ones. In the other, the trainees had to try to make the correct response unaided. The evidence obtained clearly favors the first procedure. The findings suggest that a major factor in the beneficial effect of student participation procedure is the fact that participation elicits the practice of correct responses while discouraging incorrect ones. The assumption here is that practice alone is not enough. The responses must be right. The positive effects of practicing desirable responses are cancelled by the negative effects of rehearsing incorrect ones.

ELICITS RESPONSES

A trend toward the use of student response techniques is claiming success. Investigations have related the nature of student responses and their

consequences as a basis for motivation in learning. The importance of verbalization to the control of young children's motor behavior has been emphasized by a number of researchers.

An overt response is more easily observed by both the teacher and the child than an ideational response. Overt responses, when carefully controlled, may assist in discrimination, and they may assist in sustaining attention.

A situation and an active response to it is something different from two events which we passively experience. In practical pedagogy this distinction is surely of great importance, for it leads to repetitions accompanied by a sense of belongingness, by interest and attention, by locating and curing errors and weak spots, and by reduction of wasteful learning.

Oral response can be both a stimulus as well as a response. Articulation may also be useful in eliminating pronunciation errors and in making possible immediate reinforcement.

In investigating the importance to beginning readers of saying words aloud in learning to recognize and understand words and sentences, a significant superiority was found in reading achievement in children who learned reading by the oral method over children who did not verbalize their reading. The data also suggest that oral responding might have motivational properties for children of lower intellectual ability. Oral responding by beginning readers facilitates the recognition and comprehension of printed words and sentences. The children who responded orally were superior on a test which called for the application of a variety of reading skills in contexts different from those taught in the study.

Verbalization may increase the accuracy of retention. Dividing subjects into two groups, "vocalizers" and "visualizers" according to whether or not they overtly verbalized during observation, indicated that "vocalizers" tend to recall details more accurately than do "visualizers."

In a similar study verbalization was experimentally manipulated to measure retention. It was found that subjects who verbalized their responses had an overall superiority on the recognition test, both in terms of more correct and of fewer incorrect responses. Delayed retention tests given one week later showed continued superiority in the verbalization group.

Verbal aptitudes have frequently been mentioned as a prominent component of the IQ, and high scores in verbal aptitude imply that an initial approach to reading which includes verbal responses would be the means of eliminating failure and difficulty with children of low verbal aptitude.

Children who are predisposed to reading and spelling difficulty need to use responses other than purely ideational ones at the beginning stages of reading and spelling.

Oral responses in reading (and other overt responses at the same time) increase retention of information, comprehension, and accuracy.

DIAGNOSES AND PRESCRIBES INSTANTLY

In a 1965 study in Utah's public schools the ability of a teacher to diagnose was not found to correlate with the reading gains of his pupils. Experience at ECRI and in experimental schools, however, indicated that

when a teacher diagnoses incorrect responses of pupils in reading and instantly prescribes activities to correct these responses, he produces more accurate readers. The length of time it takes to make the diagnosis or the time between the diagnosis and the correction affect pupils' gains. Steps for instant error diagnosis and prescription have been developed at ECRI.

EXPECTS HIGH LEVELS OF MASTERY WITH RATE AS A CRITERION

Benjamin Bloom has written,

Each teacher begins a new term (or course) with the expectation that about a third of his students will adequately learn what he has to teach. He expects about a third of his students to fail or to just "get by." Finally, he expects another third to learn a good deal of what he has to teach, but not enough to be regarded as "good students." This set of expectations, supported by school policies and practices in grading, becomes transmitted to the students through the grading procedures and through the methods and materials of instruction. The system creates a self-fulfilling prophecy such that the final sorting of students through the grading process becomes approximately equivalent to the original expectations.

This set of expectations, which fixes the academic goals of teachers and students, is the most wasteful and destructive aspect of the present educational system. It reduces the aspirations of both teacher and students; and it systematically destroys the ego and self-concept of a sizeable group of students who are legally required to attend school for 10 to 12 years under conditions which are frustrating and humiliating year after year. The cost of this system in reducing opportunities for further learning and in alienating youth from both school and society is so great that no society can tolerate it for long.

Most students (perhaps over 90 percent) can master what we have to teach them, and it is the task of instruction to find the means which will enable our students to master the subject under

consideration. Our basic task is to determine what we mean by mastery of the subject and to search for the methods and materials which will enable the largest proportion of our students to attain such mastery.

In an ECRI study of mastery (100% accuracy in each of three consecutive trials with rate as a criterion), it was found that low ability subjects can achieve high rates of performance and can learn and master sound-symbol relationships if they are given ample practices and a carefully sequenced program (referring to the ECRI's Reading Program).

It was found that the higher the IQ, the fewer number of oral responses and less time are required to mastery. The lower the IQ, the greater the number of oral responses and more time are required to mastery.

The low-responding pupils' rates of response, with continued practices to achieve mastery, will exceed the high-responding pupils' rates at mastery, if expectations are higher.

The rate of accurate responses can be increased through continued practices with accuracy and rate as criteria.

Other studies of high mastery expectations have indicated that; 90-95% of the pupils learning under mastery strategies have achieved at the same high level as did the top 20% of the pupils who had learned under nonmastery conditions in years past; only those treatment groups who were expected to achieve at 85% and 95% mastery (as compared to 65% and 75%) retained to a significantly greater extent than the nonmastery treatment groups; 95% of what was learned was retained; the average rate of forgetting for pupils who learn under nonmastery conditions will always be faster than the average rate

of forgetting for the pupils who learn under mastery conditions; 95% mastery yields significantly greater scores on problems where transfer is needed.

Also, ECRI has found that by increasing the required task (number of responses), an increase in rate of response can be obtained. To some maximal level, the larger the response requirement, the more rapid the response rate.

Teachers using ECRI techniques elicit a greater number of responses at more rapid rates than teachers who are not trained. The average number of responses per minute requested by teachers and emitted by pupils was higher in experimental schools than in control schools. The amount of time during a reading class in which pupils were not given the opportunity to respond ranged from 0 - 5% for the experimental teachers as compared to 50 - 80% for the control teachers.

EMPLOYS BEHAVIOR MANAGEMENT TECHNIQUES

ECRI studies found that there was a significant effect on reading achievement by increasing use of rewards such as social approval. It was found that oral reading speed and accuracy were functionally related to contingent applications of approval and pennies. As the content difficulty of reading material was increased, however, there was a marked decrease in the influence of reinforcement as a variable in controlling oral reading speed and accuracy. ECRI studies also found that: following instruction in the use of contingency management the frequency of teachers' use of contingent stimuli increased drastically; teachers reduce classroom behavior problems

through the contingent use of teacher attention; and teachers need to be taught an effective management and monitoring system in order to apply it.

The following six activities can assist teachers to achieve excellence in their teaching of reading.

1. Identify reading and language arts skills. List them. Verbalize them. Recognize them in pupils' behavior. Recognize readiness as the performance of the task.
2. Utilize the six teaching techniques listed above which will affect significantly pupils' achievement and attitudes.
3. Seek inservice education. Ask for assistance from teachers, principals, university professors, parents. Learn from observation of pupils. Invite in observers. Ask to be monitored.
4. Set aside and use time for study, development of effective teaching behavior and preparation of materials.
5. Believe in yourselves. Banish negative thoughts. Be your own best friend rather than your worse enemy.
6. Esteem the position of a teacher. Recognize the effect you have in others' lives.

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